

WHAT IS CLAIMED IS:

- 1 1. An RNase A superfamily polypeptide having an N-terminus of the sequence:
2 $X^1X^2SLX^3V$, wherein X^1 represents methionine or is absent, X^2 represents glycine
3 or is absent, and X^3 represents an amino acid residue, said RNase A superfamily
4 polypeptide being selectively toxic to a proliferating endothelial cell.
- 1 2. An RNase A superfamily polypeptide of claim 1 having SEQ. ID. No.: 2.
- 1 3. An RNase A superfamily polypeptide of claim 1 having 90% homology to SEQ.
2 ID. No.: 2.
- 1 4. An RNase A superfamily polypeptide of claim 1 having SEQ. ID. No.: 4.
- 1 5. An RNase A superfamily polypeptide of claim 1 having 90% homology to SEQ.
2 ID. No.: 4.
- 1 6. An RNase A superfamily polypeptide of claim 1 wherein the N-terminus is
2 MSLHV.
- 1 7. An RNase A superfamily polypeptide of claim 1 wherein the N-terminus is
2 MGSLHV.
- 1 8. An RNase A superfamily polypeptide of claim 1 wherein the N-terminus is
2 attached to the EDN protein.
- 1 9. An RNase A superfamily polypeptide of claim 1 wherein the proliferating
2 endothelial cell is a neoplastic endothelial cell.
- 1 10. An RNase A superfamily polypeptide of claim 1 wherein the proliferating
2 endothelial cell is a non-neoplastic endothelial cell.
- 1 11. An RNase A superfamily polypeptide of claim 9 wherein the neoplastic
2 endothelial cell is a Kaposi sarcoma KS Y-1 cell.
- 1 12. An RNase A superfamily polypeptide of claim 9 wherein the neoplastic
2 endothelial cell is a KS Y-3 cell.

- 1 13. An RNase A superfamily polypeptide of claim 9 wherein the neoplastic
2 endothelial cell is selected from the group consisting of KS 1, KS 2, KS 3, KS 4,
3 KS 5, and KS 6 cells.
- 1 14. A pharmaceutical composition comprising
2 a. a unit dosage RNase A superfamily polypeptide comprising an N-terminus
3 of the sequence: $X^1X^2SLX^3V$, wherein X^1 represents methionine or is
4 absent, X^2 represents glycine or is absent, and X^3 represents an amino acid
5 residue, said RNase A superfamily polypeptide being selectively toxic to a
6 proliferating endothelial cell; and
7 b. a pharmaceutically acceptable carrier.
- 1 15. A method of selectively inhibiting the growth of a proliferating endothelial cell by
2 a. contacting said cell with an RNase A superfamily polypeptide comprising
3 an N-terminus of the sequence: $X^1X^2SLX^3V$, wherein X^1 represents
4 methionine or is absent, X^2 represents glycine or is absent, and X^3
5 represents an amino acid residue, said RNase A superfamily polypeptide
6 being selectively toxic to a proliferating endothelial cell; and
7 b. detecting the inhibition of the growth of said cell.
- 1 16. The method of claim 15 wherein the proliferating endothelial cell is a neoplastic
2 cell.
- 1 17. The method of claim 16 wherein the neoplastic cell is a Kaposi sarcoma cell.
- 1 18. The method of claim 17 wherein the Kaposi sarcoma cell is selected from the
2 group consisting of KS 1, KS 2, KS 3, KS 4, KS 5, KS 6, KS Y-1, and KS Y-3
3 cells.
- 1 19. A method of treating a patient with proliferating endothelial cells by
2 a. administering an effective amount of an RNase A superfamily polypeptide
3 comprising an N-terminus of the sequence: $X^1X^2SLX^3V$, wherein X^1
4 represents methionine or is absent, X^2 represents glycine or is absent, and
5 X^3 represents an amino acid residue, said RNase A superfamily
6 polypeptide being selectively toxic to a proliferating endothelial cell; and

- 7 b. detecting the amelioration of Kaposi sarcoma in said patient
- 1 20. The method of claim 19 wherein the RNase A superfamily polypeptide is in an
2 aqueous solution comprising a unit dosage and pharmaceutically acceptable
3 excipients.
- 1 21. A method of manufacturing a pharmaceutical composition comprising the step of
2 combining the RNase A superfamily polypeptide of claim 1 with a
3 pharmaceutically acceptable carrier.